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ERICSSON INC. 6300 LEGACY DRIVE M/S EVR 1-C-11 PLANO, TX 75024			MURRAY, DANIEL C	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/598,152	Applicant(s) CHRISTOFFERSSON ET AL.	
	Examiner DANIEL C. MURRAY	Art Unit 2443	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-40 and 42-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-40 and 42-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20SEP2010</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This Action is in response to Applicant's amendment filed on 20SEP2010. **Claims 27-40 and 42-52** are now pending in the present application. **This Action is made FINAL.**
2. **Claims 53-55** have been canceled by Applicant.

Information Disclosure Statement

3. The information disclosure statement submitted on 20SEP2010 has been considered by the Examiner and made of record in the application.

Claim Objections

4. **Claim 38 and 39-52** are objected to because of the following informalities:
 - **Claim 38**, line 1: replace "communications unit" before "comprising" with --hardware-containing communications unit-- because "communications unit" lacks proper antecedent basis in the claims.
 - **Claim 38**, line 8: replace "communications unit" before "and said" with --hardware-containing communications unit-- because "communications unit" lacks proper antecedent basis in the claims.
 - **Claims 39-52**, line 1; replace "The unit" before "according" with --The hardware-containing unit-- because "The unit" lacks proper antecedent basis in the claims.

Appropriate correction is required.

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Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 27-36 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. **Claims 28-36** are rejected by virtue of their dependency on **claim 27**.

Claims 27-36 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory “process” under 35 U.S.C. 101 must (1) be tied to particular machine, or (2) transform underlying subject matter (such as an article or material) to a different state or thing. See page 10 of *In Re Bilski* 88 USPQ2d 1385. The claims are neither positively tied to a particular machine that accomplishes the claimed method steps nor transform underlying subject matter, and therefore do not qualify as a statutory process. The method of managing a state memory including defining, dividing, and allocating is broad enough that the claim could be completely performed mentally, verbally or without a machine nor is any transformation apparent. The method is not clearly tied to a machine and could be completely performed mentally, verbally or without a machine. Furthermore, the division of the state memory is not tied to any particular machine and clearly is broad enough that the claim could be completely performed mentally, verbally or without a machine.

Applicant attempts to claim non-statutory subject matter. Applicant fails to claim tie the subject matter to a particular machine and thus fails to fall within in a statutory category and is thus, per se, considered software. The claimed terminology “first communications unit” and “second

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communications unit” are broad enough that they can be reasonably be interpreted as non-statutory subject matter (e.g. software modules) and are thus considered software, per se. The Examiner suggests amending “first communications unit” and “second communications unit” to --first hardware-containing communications unit-- and --second hardware-containing communications unit-- in a similar fashion as the amendments to claims 37 and 38. If this is unsatisfactory the Applicant is encouraged to contact the Examiner and schedule an interview to discuss the matter.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and

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invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. **Claims 27, 28, 31-35, 37-40, 44, 47-51** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Williams et al. (US Patent # 6,144,669)** in view of **Nakatsugawa (US Patent # US 6,243,830 B1)**.

a) Consider **claim 27**, Williams et al. clearly show and disclose, a method of managing a state memory adapted for storing state information applicable in a message communication between communications units in a communications system, the method implemented by a first communication unit and a second communication unit comprising the steps of: defining at the first communication unit at least two message classes of the messages communicated between said the first communication unit and the second communication unit (abstract, column 2 lines 20-36); and dividing said memory in this first communication unit into at least two memory portions, each memory portion being assigned for storing state information associated with a specific message class (abstract, column 2 lines 37-57). However, Williams et al. does not specifically disclose that said state memory is arranged in the first communication unit and is allocated for storing state information used in message communication with the second communications unit; and in that said second communications unit requesting said first communications unit to allocate state memory space utilized for storing said state information used in said message communication with said second communications unit or wherein the state memory is allocated before said first communication unit and said second communication unit start transmitting data messages therebetween.

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Nakatsugawa shows and discloses a state information managing method which is able to manage easily state information of respective communication units, wherein said state memory is arranged in the first communication unit and is allocated for storing state information used in message communication with the second communications unit (abstract, column 2 lines 20-34); and in that said second communications unit requesting said first communications unit to allocate state memory space utilized for storing said state information used in said message communication with said second communications unit (abstract, column 2 lines 20-34 lines 53-67).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Nakatsugawa and Williams et al. since both concern managing messaging in a communication network and as such, both are with in the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate a state memory manager and allocating state memory for storing state information, as taught by, Nakatsugawa into the system of Williams et al. for the purpose of reducing communication traffic volume required for state management (Nakatsugawa; column 1 lines 7-14), thereby reducing the amount of resources required for state management. However, Williams et al. as modified by Nakatsugawa does not specifically disclose that wherein the state memory is allocated before said first communication unit and said second communication unit start transmitting data messages therebetween.

Sakaguchi et al. show and disclose a system for controlling divided areas of a cache memory, wherein the state memory is allocated before said first communication unit and said second communication unit start transmitting data messages therebetween (paragraph [0028]).

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One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Sakaguchi et al. and Williams et al. as modified by Nakatsugawa since both concern storing information and as such, both are with in the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate allocating memory sizes (equal or unequal allocations) to a number of memory portions before transmitting data, as taught by, Sakaguchi et al. into the system of Williams et al. as modified by Nakatsugawa for the purpose of enabling data to be stored in each of those areas automatically according to its state (Sakaguchi; paragraph [0006]), thereby allowing data to be stored in a particular portion of memory when it is required. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to divide the state memory before starting to transmit data messages between the communications unit because it would have been necessary to define where the message state information is stored before it can be stored (i.e. it would have been necessary/obvious to set up a storage system before actually using it).

b) Consider **claim 28**, and **as applied to claim 27 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the method according to claim 27 wherein said defining step comprises defining said at least two message classes based on at least one of: a priority type of said communications messages (Williams; abstract, column 2 lines 20-36); an application protocol used when generating said communications messages; and a session type associated with communications messages.

c) Consider **claim 31**, and **as applied to claim 27 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the method according to claim 27, further comprising: determining a message class of a communications message (Williams; abstract, column 2 lines 20-

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36); and storing state information generated based on said communications message in a memory portion associated with said determined message class (Williams; abstract, column 2 lines 37-57).

d) Consider **claim 32**, and **as applied to claim 31 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the method according to claim 31 wherein said message class determining step comprises determining said message class based on data found in said communications message (Williams; abstract, column 2 lines 20-36).

e) Consider **claim 33**, and **as applied to claim 32 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the method according to claim 32 further comprising determining whether said state information is to be stored in said memory portion (Williams; column 2 lines 37-57).

f) Consider **claim 34**, and **as applied to claim 33 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the method according to claim 33, wherein said step of determining whether said state information is to be stored comprises retrieving storage priority information from a look-up list comprising storage command information for said message classes (Williams; abstract, column 2 lines 37-57).

g) Consider **claim 35**, and **as applied to claim 34 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the method according to claim 34, wherein said step of determining whether said state information is to be stored comprises: investigating whether similar state information is already stored in said memory portion (Nakatsugawa; column 2 lines 27-41); and storing said state information if no similar state information is already stored in said memory portion (Nakatsugawa; column 2 lines 27-41).

h) Consider **claim 37**, Williams et al. clearly show and disclose, a hardware-containing unit for managing a state memory adapted for storing state information applicable in a message

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communication between communications units in a communications system, comprising: a message class definer that defines at least two message classes of the messages communicated between said communications units (abstract, column 2 lines 20-36); and a state memory divider that divides said state memory into at least two memory portions, each memory portion being assigned for storing information associated with a specific message class (abstract, column 2 lines 37-57); and in that said message class definer is configured for defining said at least two message classes based on at least one of: a priority type of said communications messages (abstract, column 2 lines 20-36); an application protocol used when generating said communications messages; and a session type associated with communications messages. However, Williams et al. does not specifically disclose a state memory adapted for storing state information applicable in said message communication; a state memory managing unit; that said state memory is arranged in a first communication unit and is allocated for storing state information used in message communication with a second communications unit; or in that said second communications unit requesting said first communications unit to allocate state memory space utilized for storing said state information used in said message communication with said second communications unit; or wherein the state memory is allocated before said first communication unit and said second communication unit start transmitting data messages therebetween.

Nakatsugawa shows and discloses a state information managing method which is able to manage easily state information of respective communication units, wherein a state memory adapted for storing state information applicable in said message communication (abstract, column 2 lines 20-34); a state memory managing unit (column 2 lines 20-34); that said state memory is arranged in a first communication unit and is allocated for storing state information used in message communication with a second communications unit (abstract, column 2 lines 20-34); and in that said

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second communications unit requesting said first communications unit to allocate state memory space utilized for storing said state information used in said message communication with said second communications unit (abstract, column 2 lines 20-34 lines 53-67).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Nakatsugawa and Williams et al. since both concern managing messaging in a communication network and as such, both are with in the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate a state memory manager and state memory for storing state information, as taught by, Nakatsugawa into the system of Williams et al. for the purpose of reducing communication traffic volume required for state management (Nakatsugawa; column 1 lines 7-14), thereby reducing the amount of resources required for state management. However, Williams et al. as modified by Nakatsugawa does not specifically disclose that wherein the state memory is allocated before said first communication unit and said second communication unit start transmitting data messages therebetween.

Sakaguchi et al. show and disclose a system for controlling divided areas of a cache memory, wherein the state memory is allocated before said first communication unit and said second communication unit start transmitting data messages therebetween (paragraph [0028]).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Sakaguchi et al. and Williams et al. as modified by Nakatsugawa since both concern storing information and as such, both are with in the same environment.

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Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate allocating memory sizes (equal or unequal allocations) to a number of memory portions before transmitting data, as taught by, Sakaguchi et al. into the system of Williams et al. as modified by Nakatsugawa for the purpose of enabling data to be stored in each of those areas automatically according to its state (Sakaguchi; paragraph [0006]), thereby allowing data to be stored in a particular portion of memory when it is required. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to divide the state memory before starting to transmit data messages between the communications unit because it would have been necessary to define where the message state information is stored before it can be stored (i.e. it would have been necessary/obvious to set up a storage system before actually using it).

i) Consider **claim 38**, Williams et al. clearly show and disclose, a hardware-containing communications unit adapted for message communication with at least one external communications unit in a communications system, said communications unit comprising: a message class definer that defines at least two message classes of the messages communicated between said communications unit and said at least one external communications unit (abstract, column 2 lines 20-36); and a state memory divider that divides said memory into at least two memory portions, each memory portion being assigned for storing information associated with a specific message class (abstract, column 2 lines 37-57); and in that said message class definer is configured for defining said at least two message classes based on at least one of: a priority type of said communications messages (abstract, column 2 lines 20-36); an application protocol used when generating said communications messages; and a session type associated with communications messages. However, Williams et al. does not specifically disclose a state memory adapted for storing state information applicable in said message communication; a state memory managing unit; that said state memory is

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allocated for storing state information used in message communication with one of the at least one external communications unit; or that said one external communications unit requesting said state memory managing unit to allocate state memory space utilized for storing said state information used in said message communication with said one external communications unit or wherein the state memory is allocated before data messages are communicated with the one external communications unit.

Nakatsugawa shows and discloses a state information managing method which is able to manage easily state information of respective communication units, wherein a state memory adapted for storing state information applicable in said message communication (abstract, column 2 lines 20-34); a state memory managing unit (column 2 lines 20-34); that said state memory is allocated for storing state information used in message communication with one of the at least one external communications unit (abstract, column 2 lines 20-34); or that said one external communications unit requesting said state memory managing unit to allocate state memory space utilized for storing said state information used in said message communication with said one external communications unit (abstract, column 2 lines 20-34 lines 53-67).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Nakatsugawa and Williams et al. since both concern managing messaging in a communication network and as such, both are with in the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate a state memory manager and state memory for storing state information, as taught by, Nakatsugawa into the system of Williams et al. for the purpose of reducing communication traffic volume required for state management (Nakatsugawa; column 1

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lines 7-14), thereby reducing the amount of resources required for state management. However, Williams et al. as modified by Nakatsugawa does not specifically disclose that wherein the state memory is allocated before data messages are communicated with the one external communications unit.

Sakaguchi et al. show and disclose a system for controlling divided areas of a cache memory, wherein the state memory is allocated before data messages are communicated with the one external communications unit (paragraph [0028]).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Sakaguchi et al. and Williams et al. as modified by Nakatsugawa since both concern storing information and as such, both are with in the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate allocating memory sizes (equal or unequal allocations) to a number of memory portions before transmitting data, as taught by, Sakaguchi et al. into the system of Williams et al. as modified by Nakatsugawa for the purpose of enabling data to be stored in each of those areas automatically according to its state (Sakaguchi; paragraph [0006]), thereby allowing data to be stored in a particular portion of memory when it is required. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to divide the state memory before starting to transmit data messages between the communications unit because it would have been necessary to define where the message state information is stored before it can be stored (i.e. it would have been necessary/obvious to set up a storage system before actually using it).

j) Consider **claim 39**, and **as applied to claim 37 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the unit according to claim 37, wherein said state memory

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divider is configured for dividing said state memory into at least two memory portions based on said message class definition from said message class definer (Williams; abstract, column 2 lines 37-57).

k) Consider **claim 40**, and **as applied to claim 37 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the unit according to claim 37, wherein said managing unit and said state memory are arranged in the first communication unit and said state memory is allocated for storing state information used in message communication with the second communications unit (Nakatsugawa; abstract, column 2 lines 20-34).

l) Consider **claim 44**, and **as applied to claim 37 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the unit according to claim 37, wherein said message class definer is configured for defining said at least two message classes based on at least one of: a priority type of said communications messages (Williams; abstract, column 2 lines 20-36); an application protocol used when generating said communications messages; and a session type associated with communications messages.

m) Consider **claim 47**, and **as applied to claim 37 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the unit according to claim 37, characterized by: message analyzer that determines a message class of a communications message (Williams; abstract, column 2 lines 20-36); and state storing unit that stores state information generated based on said communications message in a memory portion associated with said determined message class (Williams; abstract, column 2 lines 37-57).

n) Consider **claim 48**, and **as applied to claim 47 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the unit according to claim 47, wherein said message analyzer is configured for determining said message class based on data found in said communications message (Williams; abstract, column 2 lines 20-36).

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o) Consider **claim 49**, and **as applied to claim 47 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the unit according to claim 47, wherein said message analyzer is configured to determine whether said state information is to be stored in said memory portion (Williams; abstract, column 2 lines 37-57).

p) Consider **claim 50**, and **as applied to claim 49 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the unit according to claim 49, wherein said message analyzer is configured for retrieving storage priority information from an associated look-up list comprising storage command information for said message classes and for generating a storing command based on said storage priority information, said state storing unit being responsive to said storing command (Williams; abstract, column 2 lines 36-57).

q) Consider **claim 51**, and **as applied to claim 49 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the unit according to claim 49, wherein said message analyzer is configured for investigating whether similar state information is already stored in said memory portion (Nakatsugawa; abstract, column 2 lines 27-41) and for generating a storing command if no similar state information is already stored in said memory portion, said state storing unit being responsive to said storing command (Nakatsugawa; abstract, column 2 lines 27-41).

10. **Claims 29, 30, 45, and 46** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Williams et al. (US Patent # 6,144,669)** in view of **Nakatsugawa (US Patent # US 6,243,830 B1)** in further view of **Sakaguchi et al. (US Patent # US 2003/0212855 A1)**.

a) Consider **claim 29**, and **as applied to claim 27 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the method according to claim 27. However, Williams et al.

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as modified by Nakatsugawa does not specifically disclose that said dividing step comprises allocating an equal memory size to said at least two memory portions.

Sakaguchi et al. show and disclose a system for controlling divided areas of a cache memory, wherein said dividing step comprises allocating an equal memory size to said at least two memory portions (figure 3, figure 5, paragraph [0028]).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Sakaguchi et al. and Williams et al. as modified by Nakatsugawa since both concern storing information and as such, both are with in the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate allocating memory sizes (equal or unequal allocations) to a number of memory portions, as taught by, Sakaguchi et al. into the system of Williams et al. as modified by Nakatsugawa for the purpose of enabling data to be stored in each of those areas automatically according to its state (Sakaguchi; paragraph [0006]), thereby preventing data to be accessed frequently from being swapped out by data not to be accessed so often.

b) Consider **claim 30**, and **as applied to claim 27 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the method according to claim 27. However, Williams et al. as modified by Nakatsugawa does not specifically disclose that said dividing step comprises allocating a first memory size to a first memory portion and a second different memory size to a second memory portion based on a first message class associated with said first memory portion and a second message class associated with said second memory portion.

Sakaguchi et al. show and disclose a system for controlling divided areas of a cache memory, wherein dividing step comprises allocating a first memory size to a first memory portion and a

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second different memory size to a second memory portion based on a first message class associated with said first memory portion and a second message class associated with said second memory portion (figure 3, figure 5, paragraph [0028]).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Sakaguchi et al. and Williams et al. as modified by Nakatsugawa since both concern storing information and as such, both are with in the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate allocating memory sizes (equal or unequal allocations) to a number of memory portions, as taught by, Sakaguchi et al. into the system of Williams et al. as modified by Nakatsugawa for the purpose of enabling data to be stored in each of those areas automatically according to its state (Sakaguchi; paragraph [0006]), thereby preventing data to be accessed frequently from being swapped out by data not to be accessed so often.

c) Consider **claim 45**, and **as applied to claim 37 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the unit according to claim 37. However, Williams et al. as modified by Nakatsugawa does not specifically disclose that said state memory divider is configured for allocating an equal memory size to said at least two memory portions.

Sakaguchi et al. show and disclose a system for controlling divided areas of a cache memory, wherein that said state memory divider is configured for allocating an equal memory size to said at least two memory portions (figure 3, figure 5, paragraph [0028]).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Sakaguchi et al. and Williams et al. as modified by

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Nakatsugawa since both concern storing information and as such, both are with in the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate allocating memory sizes (equal or unequal allocations) to a number of memory portions, as taught by, Sakaguchi et al. into the system of Williams et al. as modified by Nakatsugawa for the purpose of enabling data to be stored in each of those areas automatically according to its state (Sakaguchi; paragraph [0006]), thereby preventing data to be accessed frequently from being swapped out by data not to be accessed so often.

d) Consider **claim 46**, and **as applied to claim 37 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the unit according to claim 37. However, Williams et al. as modified by Nakatsugawa does not specifically disclose that said state memory divider is configured for allocating a first memory size to a first memory portion and a second different memory size to a second memory portion.

Sakaguchi et al. show and disclose a system for controlling divided areas of a cache memory, wherein said state memory divider is configured for allocating a first memory size to a first memory portion and a second different memory size to a second memory portion (figure 3, figure 5, paragraph [0028]).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Sakaguchi et al. and Williams et al. as modified by Nakatsugawa since both concern storing information and as such, both are with in the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate allocating memory sizes (equal or unequal allocations) to a

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number of memory portions, as taught by, Sakaguchi et al. into the system of Williams et al. as modified by Nakatsugawa for the purpose of enabling data to be stored in each of those areas automatically according to its state (Sakaguchi; paragraph [0006]), thereby preventing data to be accessed frequently from being swapped out by data not to be accessed so often.

11. **Claims 36, 42-43, and 52** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Williams et al. (US Patent # 6,144,669)** in view of **Nakatsugawa (US Patent # US 6,243,830 B1)** in further view of **Leung et al. (US Patent Publication # US 2002/0132613 A1)**.

a) Consider **claim 36**, and **as applied to claim 35 above**, of Williams et al. as modified by Nakatsugawa clearly show and disclose, the method according to claim 35. However, Williams et al. as modified by Nakatsugawa does not specifically disclose that said step of determining whether said state information is to be stored comprises: compressing said communications message; calculating a compression factor for said communications message; and determining whether said state information is to be stored in said memory portion based on said compression factor.

Leung et al. show and disclose message compression and more particularly to a method and system for providing a context, which is a dictionary and/or code related to the dictionary, for message compression, wherein said step of determining whether said state information is to be stored comprises: compressing said communications message (paragraph [0031], [0033], [0035]); calculating a compression factor for said communications message (paragraph [0037], [0038]); and determining whether said state information is to be stored in said memory portion based on said compression factor (paragraph [0033]).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Leung et al. and Williams et al. as modified by Nakatsugawa

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since both concern managing messaging in a communication network and as such, both are with in the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate message compression and storage based on compression, as taught by, Leung et al. into the system of Williams et al. as modified by Nakatsugawa for the purpose of storing information from one communications session to another (Leung; paragraph [0011], [0033]), thereby decreasing the amount of information that needs to be exchanged.

b) Consider **claim 42**, and **as applied to claim 37 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the unit according to claim 37. However, Williams et al. as modified by Nakatsugawa does not specifically disclose that said state information is used during compression and/or decompression of said communications messages.

Leung et al. show and disclose message compression and more particularly to a method and system for providing a context, which is a dictionary and/or code related to the dictionary, for message compression, wherein that said state information is used during compression and/or decompression of said communications messages (paragraph [0033]).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Leung et al. and Williams et al. as modified by Nakatsugawa since both concern managing messaging in a communication network and as such, both are with in the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate state information is used during compression/decompression, as taught by, Leung et al. into the system of Williams et al. as modified by Nakatsugawa for the

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purpose of storing information from one communications session to another (Leung; paragraph [0033]), thereby decreasing the amount of information that needs to be exchanged.

c) Consider **claim 43**, and **as applied to claim 37 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the unit according to claim 37. However, Williams et al. as modified by Nakatsugawa does not specifically disclose a compressor; and a decompressor, wherein said state information is used by at least one of said compressor and said decompressor.

Leung et al. show and disclose message compression and more particularly to a method and system for providing a context, which is a dictionary and/or code related to the dictionary, for message compression, wherein a compressor; and a decompressor, wherein said state information is used by at least one of said compressor and said decompressor.

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Leung et al. and Williams et al. as modified by Nakatsugawa since both concern managing messaging in a communication network and as such, both are with in the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate a compressor/decompressor and state information being used during compression/decompression, as taught by, Leung et al. into the system of Williams et al. as modified by Nakatsugawa for the purpose of storing information from one communications session to another (Leung; paragraph [0033]), thereby decreasing the amount of information that needs to be exchanged.

d) Consider **claim 52**, and **as applied to claim 49 above**, Williams et al. as modified by Nakatsugawa clearly show and disclose, the unit according to claim 49. However, Williams et al. as modified by Nakatsugawa does not specifically disclose that said message analyzer is configured for

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receiving a compression factor obtained during compressing said communications message and for generating a storing command based on said compression factor, said state storing unit being responsive to said storing command.

Leung et al. show and disclose message compression and more particularly to a method and system for providing a context, which is a dictionary and/or code related to the dictionary, for message compression, wherein said message analyzer is configured for receiving a compression factor obtained during compressing said communications message (paragraph [0031], [0033], [0035], [0037], [0038]) and for generating a storing command based on said compression factor, said state storing unit being responsive to said storing command (paragraph [0033]).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Leung et al. and Williams et al. as modified by Nakatsugawa since both concern managing messaging in a communication network and as such, both are with in the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate message compression and storage based on compression, as taught by, Leung et al. into the system of Williams et al. as modified by Nakatsugawa for the purpose of storing information from one communications session to another (Leung; paragraph [0011], [0033]), thereby decreasing the amount of information that needs to be exchanged.

Response to Arguments

12. Applicant's arguments filed 20SEP2010 have been fully considered but they are not persuasive.

Applicant argues that "...the amended independent claim 27 specifically recites **"the method implemented by a first communication unit and a second communication unit"** so as to meet the machine-or-transformation test. Hence, the method is tied to a particular machine." And "In the alternative, the U.S. Supreme Court in *Bilski, et al. v. Kappos*, decided on June 28, 2010 held that the machine-or-transformation test, as previously announced by the Federal Circuit Court of Appeals, is not the sole test for patent eligibility under § 101, stating that: "The Court is unaware of any ordinary, contemporary, common meaning of "process" that would require it to be tied to a machine." Hence, the Examiner's basis for rejecting the amended independent 37 is no longer based on current patent law."

The Examiner respectfully disagrees; Applicant alleges that the claimed terminology "first communications unit" and "second communications unit" ties the method to a particular machine and is sufficient to meet the machine-or-transformation test. The claimed terminology "first communications unit" and "second communications unit" is, in and of itself, insufficient to meet the machine-or-transformation test. Applicant fails to tie the subject matter to a particular machine and thus fails to fall within in a statutory category and is thus, per se, considered software. The claimed terminology "first communications unit" and "second communications unit" are broad enough that the can be reasonably be interpreted as non-statutory subject matter (e.g. software modules, software components, software units, etc.) and are thus considered software, per se. The Examiner suggests amending "first communications unit" and "second communications unit" to --first hardware-containing communications unit-- and --second hardware-containing communications unit-- in a

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similar fashion as the amendments to claims 37 and 38. If this is unsatisfactory the Applicant is encouraged to contact the Examiner and schedule and interview to discuss the matter.

With respect to Applicant's alternative argument, it is unclear exactly what the Applicant is attempting to argue. It is assumed Applicant is attempting to argue the validity of the rejection under 35 U.S.C. 101. While the U.S. Supreme Court in *Bilski, et al. v. Kappos*, decided on June 28, 2010 held that the machine-or-transformation test is not the *sole* test for patent eligibility under § 101 it still remains a valid test for patent eligibility and for the reasons detailed above the subject matter is considered ineligible.

Applicant argues that that Williams, Nakatsugawa, and Sakaguchi fail to disclose "the claimed limitations where "the second communication unit requesting said first communications unit to allocate state memory space utilized for storing state information wherein the state memory is allocated before said first communication unit and said second communication unit start transmitting data messages therebetween" ”.

The Examiner respectfully disagrees; in response to Applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Nakatsugawa clearly discloses the second communication unit requesting said first communications unit to allocate state memory space utilized for storing state information (Nakatsugawa; abstract, column 2 lines 20-41, column 3 lines 43-67, column 6 lines 47-58).

Nakatsugawa discloses report communication units (second communication units) rewriting the state information stored in a memory portion into new state information after change if the state information in own communication unit has been changed; and a first transmitting/receiving

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portion for adding the state information stored in the memory portion and own address to the recovery command (request) and then transmitting the recovery command (request) when respective report communication units (second communication units) receive the recovery command (request) for recovering the state information; and the collecting communication unit (first communication unit) comprising: a second transmitting/receiving portion for transmitting the recovery command (request) to recover the state information (alter its own state memory) and then receiving the recovery command (request) to which changed state information and their own addresses of respective report communication units (second communication units) are added collectively.

Nakatsugawa also discloses in the communication unit 1-2 (collecting communication unit)(first communication unit), the transmitting/receiving I/F 11-2 receives the recovery command (request) from the communication unit 1-n (second communication unit), and stores respective state information in the received recovery command into the state information memory 9-2.

Like the above, when the state information has been changed in respective communication units, the state information in the state information memories are rewritten and the report flags are set. In addition, when the recovery command (request) is received, the report flag is reset, then its own address and the state information are added to the recovery command (request), and then they are transmitted.

Clearly the recovery command functions as a request that is sent from one communication unit to another. It is also clearly the receiving communication unit alters its state memory upon receipt of the recovery command.

Sakaguchi clearly discloses wherein the state memory is allocated before said first communication unit and said second communication unit start transmitting data messages therebetween (paragraph [0024], [0028]).

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Sakaguchi clearly discloses four types areas are defined in the cache memory 103. The four types of areas are a user data area, a meta data (i-node) area, another meta data (directory information) area, and still another meta data (other) area. Area numbers, 00, 01, 10, and 11 are assigned to those areas, which are set in the area number 202 field. User data means a user specified file. Meta data means data used by the file system to control I/O processings. Each I/O command issued by the CPU 101 includes identification information for distinguishing one of the above described four types of data from others in I/O controlling. The identification information included in each I/O command is recorded as an area number as is when data is stored/read in/from a segment of the cache memory 103 according to an I/O command (paragraph [0024]).

Sakaguchi clearly discloses the system manager assigns the size of each cache memory area. FIG. 5 shows an area setting screen in this embodiment. When the system manager starts up the area setting screen, at first the system manager is requested to set the number of divisions (for the cache memory) on the displayed screen (step 501). When the setting ends, the system manager is requested to set the size of area #1. On the screen, the system manager can also set the size of each cache memory area (steps 502 and 503). The total of the area sizes cannot exceed the capacity of the usable cache memory area, so that the first area size is accepted within a range of 0 to the maximum cache memory size. Similarly, the size of the (n)-th area can be selected within 0 to the remaining cache memory size. When sizes are set for all the areas, the area setting program is terminated. Sizes are not equal among all the areas; an area that is often used can have a larger size. Consequently, the cache memory can be controlled efficiently (paragraph [0028]).

Nakatsugawa clearly discloses the second communication unit requesting said first communications unit to allocate state memory space utilized for storing state information.

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Sakaguchi clearly discloses the definition of four types of areas in a cache memory and clearly discloses shows setting up the areas before use. Sakaguchi discloses allocating memory for storage before is use (i.e. before the start of transmitting data).

Therefore, Nakatsugawa and Sakaguchi clearly discloses the second communication unit requesting said first communications unit to allocate state memory space utilized for storing state information wherein the state memory is allocated before said first communication unit and said second communication unit start transmitting data messages therebetween.

Furthermore, as state in the previous Office Action, it would have been obvious to one of ordinary skill in the art at the time the invention was made to divide the state memory before starting to transmit data messages between the communications unit because it would have been necessary to define where the message state information is stored before it can be stored (i.e. it would have been necessary/obvious to set up a storage system before actually using it).

Applicant argues that "...Sakaguchi discloses where a person namely the system manager interfaces with an area setting screen to assign the size of each cache memory area, in contrast the amended independent claim 27 recites where the second communication unit requests the first communication unit to allocate state memory space for storing state information and that the state memory is allocated before the first communication unit and the second communication unit start transmitting data messages therebetween."

In response to Applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). While Sakaguchi discloses a system manager which is a person, Sakaguchi still discloses the claimed feature of that the state memory is allocated before the

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first communication unit and the second communication unit start transmitting data messages therebetween (see above for details). Nakatsugawa clearly teaches the second communication unit requests the first communication unit to allocate state memory space for storing state information (see above for details). The combination of Nakatsugawa and Sakaguchi clearly teach the claimed features. Nakatsugawa clearly discloses a communication unit requesting another communication unit to allocate state memory space for storing state information and it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate allocating the state memory before the first communication unit and the second communication unit start transmitting data messages therebetween, as taught by, Sakaguchi into the communication unit of Nakatsugawa for the purpose of enabling data to be stored in each of those areas automatically according to its state, thereby allowing data to be stored in a particular portion of memory when it is required.

In other words, it would have been obvious to one of ordinary skill in the art the implement the functions of the system manager (i.e. allocating memory before the start of transmitting data) of Sakaguchi in the communication unit of Nakatsugawa in order to allocate the memory before sending messages in order to allow data to be stored in a particular portion of memory based on type.

Applicant argues "...that by amending independent claim 27 to recite the limitation "wherein the state memory is allocated before said first communication unit and said second communication unit start transmitting data messages therebetween" makes it clear that Nakatsugawa does not cure William's deficiency with respect to the claimed "that said state memory is arranged in a first communication unit and is allocated for storing state information used in message communication with a second communications unit; and in that said second communications unit

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requesting said first communications unit to allocate state memory space utilized for storing said state information used in said message communication with said second communications unit" (see page 6 in the Office Action). ... Hence, it is no longer proper to interpret Nakatsugawa's report communication unit's sending of a recovery command to the collecting communication unit as being equivalent to the claimed second communication unit requesting the first communications unit to: allocate (or divide) state memory space before the transmission of data messages (recovery commands) therebetween."

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Furthermore, it is unclear exactly what Applicant is attempting to argue. It is also unclear how the amended claim limitation "wherein the state memory is allocated before said first communication unit and said second communication unit start transmitting data messages therebetween" which was rejected by Sakaguchi would make it clear that Nakatsugawa does not cure William's deficiency with respect to another claim limitation.

It appears Applicant is attempting to argue that the introduction of Sakaguchi would render Nakatsugawa inoperable. However, as detailed above Nakatsugawa clearly discloses the second communication unit requesting said first communications unit to allocate state memory space utilized for storing state information and Sakaguchi clearly discloses the state memory is allocated before said first communication unit and said second communication unit start transmitting data messages therebetween. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). As

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detailed above, the combination of Nakatsugawa and Sakaguchi clearly teach the claimed features. Nakatsugawa clearly discloses a communication unit requesting another communication unit to allocate state memory space for storing state information and it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate allocating the state memory before the first communication unit and the second communication unit start transmitting data messages therebetween, as taught by, Sakaguchi into the communication unit of Nakatsugawa for the purpose of enabling data to be stored in each of those areas automatically according to its state, thereby allowing data to be stored in a particular portion of memory when it is required.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the Applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the

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Applicant, in preparing the responses, to fully consider each of the cited references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage disclosed by the Examiner.

With respect to any amendments to the claimed invention, it is respectfully requested that Applicant indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

If Applicant intends to make numerous amendments the Examiner respectfully requests that Applicant submit a clean copy of the claims in addition to the marked up copy of the claims in order to expedite the examination process.

The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure (See PTO-Form 892).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL C. MURRAY whose telephone number is 571-270-1773. The examiner can normally be reached on Monday - Friday 0800-1700 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tonia Dollinger can be reached on (571)-272-4170. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/D. C. M./
Examiner, Art Unit 2443

/Tonia LM Dollinger/
Supervisory Patent Examiner, Art Unit 2443